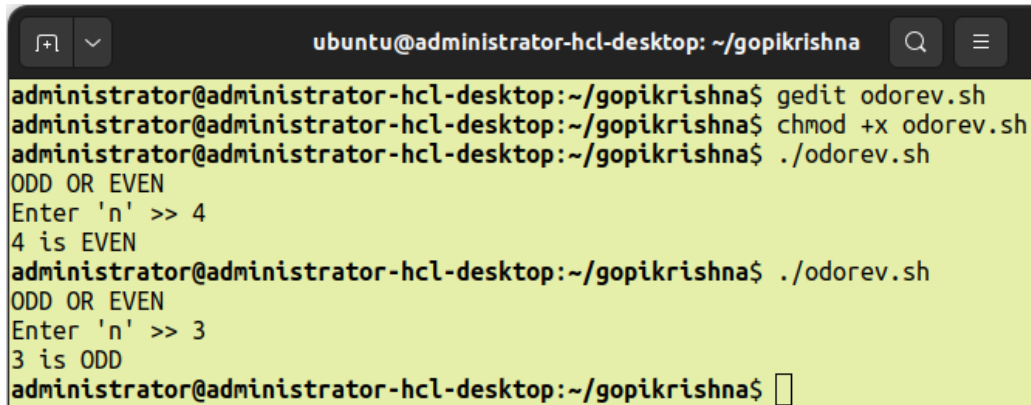


3.1>>ODD OR EVEN

```
echo "ODD OR EVEN"
echo -n "Enter 'n' >> "
read n
if [ $((n%2)) -eq 0 ]; then
    echo "$n is EVEN"
else
    echo "$n is ODD"
fi
```

OUTPUT

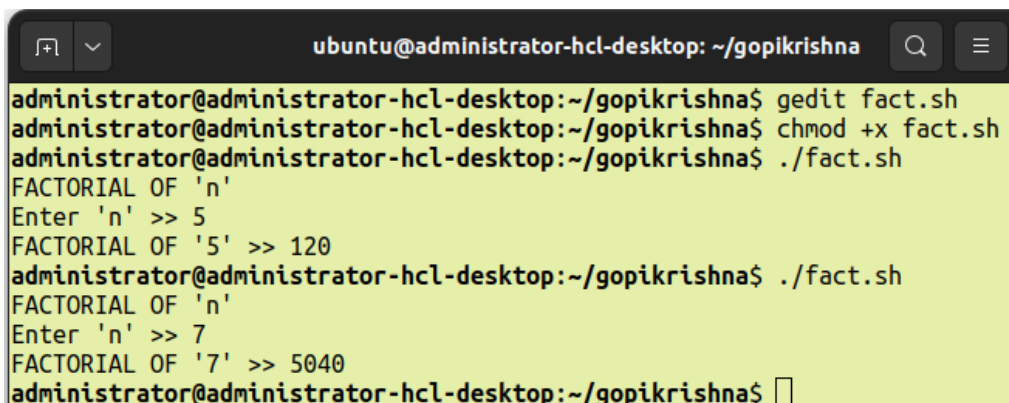
A terminal window titled 'ubuntu@administrator-hcl-desktop: ~/gopikrishna' showing the execution of a shell script. The user runs 'gedit odorev.sh', 'chmod +x odorev.sh', and './odorev.sh'. The script prompts 'Enter 'n' >> ' and the user enters '4'. The output is '4 is EVEN'. The user runs './odorev.sh' again, enters '3', and the output is '3 is ODD'.

```
ubuntu@administrator-hcl-desktop: ~/gopikrishna
administrator@administrator-hcl-desktop:~/gopikrishna$ gedit odorev.sh
administrator@administrator-hcl-desktop:~/gopikrishna$ chmod +x odorev.sh
administrator@administrator-hcl-desktop:~/gopikrishna$ ./odorev.sh
ODD OR EVEN
Enter 'n' >> 4
4 is EVEN
administrator@administrator-hcl-desktop:~/gopikrishna$ ./odorev.sh
ODD OR EVEN
Enter 'n' >> 3
3 is ODD
administrator@administrator-hcl-desktop:~/gopikrishna$
```

3.2>>FACTORIAL OF A NUMBER

```
echo "FACTORIAL OF 'n'"
echo -n "Enter 'n' >> "
read n
fact=1
z=0
if [ $n == $z ]; then
    echo "FACTORIAL OF 0 >> 1"
else
    for((i=2;i<=n;i++))
    do
        fact=$((fact*i))
    done
fi
echo -n "FACTORIAL OF '$n' >> $fact"
echo
```

OUTPUT

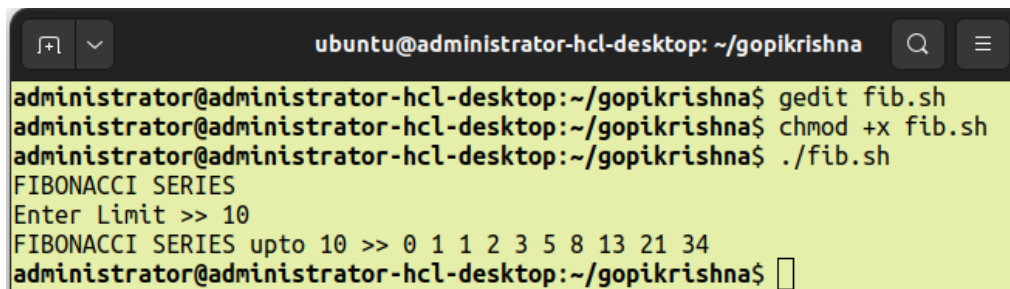
A terminal window titled 'ubuntu@administrator-hcl-desktop: ~/gopikrishna' showing the execution of a shell script. The user runs 'gedit fact.sh', 'chmod +x fact.sh', and './fact.sh'. The script prompts 'Enter 'n' >> ' and the user enters '5'. The output is 'FACTORIAL OF '5' >> 120'. The user runs './fact.sh' again, enters '7', and the output is 'FACTORIAL OF '7' >> 5040'.

```
ubuntu@administrator-hcl-desktop: ~/gopikrishna
administrator@administrator-hcl-desktop:~/gopikrishna$ gedit fact.sh
administrator@administrator-hcl-desktop:~/gopikrishna$ chmod +x fact.sh
administrator@administrator-hcl-desktop:~/gopikrishna$ ./fact.sh
FACTORIAL OF 'n'
Enter 'n' >> 5
FACTORIAL OF '5' >> 120
administrator@administrator-hcl-desktop:~/gopikrishna$ ./fact.sh
FACTORIAL OF 'n'
Enter 'n' >> 7
FACTORIAL OF '7' >> 5040
administrator@administrator-hcl-desktop:~/gopikrishna$
```

3.3>>FIBONACCI SERIES

```
echo "FIBONACCI SERIES"
n1=0
n2=1
n3=$((n1+n2))
echo -n "Enter Limit >> "
read lim
echo -n "FIBONACCI SERIES upto $lim >> "
echo -n "$n1 $n2"
for (( i=3 ; i <= lim ; ++i ))
do
    echo -n " $n3"
    n1=$n2
    n2=$n3
    n3=$((n1+n2))
done
echo
```

OUTPUT

A terminal window titled 'ubuntu@administrator-hcl-desktop: ~/gopikrishna' with search and menu icons. The terminal shows the following commands and output:

```
administrator@administrator-hcl-desktop:~/gopikrishna$ gedit fib.sh
administrator@administrator-hcl-desktop:~/gopikrishna$ chmod +x fib.sh
administrator@administrator-hcl-desktop:~/gopikrishna$ ./fib.sh
FIBONACCI SERIES
Enter Limit >> 10
FIBONACCI SERIES upto 10 >> 0 1 1 2 3 5 8 13 21 34
administrator@administrator-hcl-desktop:~/gopikrishna$
```